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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,316	04/01/2004	James D. Young	CYSZ 2 00083	7248
27885 7590 02/02/2007 FAY SHARPE LLP 1100 SUPERIOR AVENUE, SEVENTH FLOOR CLEVELAND, OH 44114			EXAMINER CHARLES, MARCUS	
			ART UNIT	PAPER NUMBER
			3682	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		02/02/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/815,316

Applicant(s)

YOUNG ET AL.

Examiner

Marcus Charles

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-12 and 14-17 is/are rejected.
- 7) ☒ Claim(s) 4 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>04-01-2004 & 08-30-2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is the first action relating to serial application number filed 04-01-2004. Claims 1-17 are currently pending.

Drawings

1. The examiner has accepted the drawing filed with this application as formal drawing.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO (98/29673) to Young. WO (98/29673) discloses the claimed invention including the roller chain drive comprising a first sprocket (112) having a first plurality of asymmetric sprocket teeth, a second sprocket (114) having a second plurality of asymmetric sprocket teeth, wherein the first asymmetric teeth profile comprises first and second different asymmetric teeth profile. WO (98/29673) fails to disclose the pressure angles of the first and second asymmetric teeth profile are different such that the pressure angle of the second asymmetric teeth profile is at least 5 degrees greater than the pressure angle of the first teeth profile. It is inherent that the first and second tooth profile will have different pressure angles because the teeth profiles are different. However, it would have been obvious to one of ordinary skill in the art at the time of the

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invention would to modify the device of WO (98/29673) so that pressure angles the second pressure angle would be at least 5 degrees greater than the first pressure angle, the first pressure angle is at least negative three (-3) degrees but more than ten (10) degrees and the second pressure angle is at least six (6) degrees but not more than twenty three (23) degrees, since it has been held that where the general conditions of the claim is disclose in the prior art, discovering the optimum or workable ranges involves routing skill in the art. In re Aller, 105 USPQ 233.

4. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable Young (5,997,424). Young discloses the claimed invention including the roller chain drive comprising a first sprocket (112) having a first plurality of asymmetric sprocket teeth, a second sprocket (114) having a second plurality of asymmetric sprocket teeth, wherein the first plurality asymmetric teeth comprises first and second different asymmetric teeth profile randomly spaced around the hub of the sprocket (see fig. 8). Young fails to disclose the pressure angles are different such that the pressure angle of the second asymmetric teeth profile is at least 5 degrees greater than the pressure angle of the asymmetric teeth profile. It is inherent that the first and second tooth profile will have different pressure angles because the profiles are different. However, it would have been obvious to one of ordinary skill in the art at the time of the invention would modify the device of Young so that the second pressure angle would be at least 5 degrees greater than the first pressure angle, the first pressure angle is at least negative three (-3) degrees but more than ten (10) degrees and the second pressure angle is at least six (6) degrees but not more than twenty three (23) degrees, since it has been held that

where the general conditions of the claim is disclose in the prior art, discovering the optimum or workable ranges involves routing skill in the art. In re Aller, 105 USPQ 233.

In claim 5, the claimed invention is inherently included in Young (5,997,424) device.

In claims 6-7, note the radius R^1 connected the first and second teeth profiles is smaller than the radius of the roller (see fig. 13a).

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Young (424) in view of Meyer (2,953,930) Young discloses the claimed invention but does not disclose the cushion ring secured to the hub. Meyer discloses the sprocket having a cushion ring (16) secured to the hub (see figs. 3-4). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include a cushion ring to the hub of Young in view of Meyer in order to reduce noise between the chain and the sprocket.

In claim 9, Meyer discloses the claimed invention (see cushions 16").

In claims 10-12 and 14-17, Young discloses the claimed invention above.

6. Applicant cannot rely up the parent applications because the claimed invention is not disclosed as claimed in the parent applications. See MPEP 201.08. The disclosure parent application fails to disclose the claimed invention. If application feels the claimed invention is disclosed in the prior are. Applicant must clearly point out the area in the specification where the subject claimed matter is disclosed.

Allowable Subject Matter

7. Claims 4 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Haefeli (2,492,219), UK (2086817) and JP (57-173649) disclose a sprocket with a cushion secured to the hub. EP (086085), JP (09-42385) and EP (0791533) disclose a roller chain.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus Charles whose telephone number is (571) 272-7101. The examiner can normally be reached on Monday-Thursday 7:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ridley Richard can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Marcus Charles
Primary Examiner
Art Unit 3682
January 30, 2007